Nucleotide Second Messenger Signaling in Bacteria

SPP 1879 Kick-off Meeting
16-17 September, 2016, Harnack-Haus, Berlin-Dahlem, Germany

Organizers:
Regine Hengge, Mihaela Pruteanu & Christine Kanow-Scheel
Humboldt-Universität zu Berlin, Germany

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Conference location

Harnack-Haus - Tagungsstätte der Max-Planck-Gesellschaft
Ihnestr. 16-20, 14195 Berlin, Germany
Subway: U3, Thielplatz
Tel. +49 30 8413 3800
E-mail: info@harnackhaus-berlin.mgp.de
http://www.harnackhaus-berlin.mpg.de
Scientific Programme
Nucleotide Second Messenger Signaling in Bacteria

SPP 1879 Kick-off Meeting

Friday Morning (September 16th 9:00 – 13:00)

08:30 – 09:00  Registration / Poster set-up / Get together
09:00 – 09:10  Regine Hengge: Welcome and Introduction

Session 1. ppGpp

Discussion Leader: Susanne Häussler (Helmholtz Centre for Infection Research, Braunschweig)

09:10 – 09:35  Daniel Wilson (LMU München):
  The stringent factor RelA adopts an open conformation on
  the ribosome to stimulate ppGpp synthesis
09:35 – 10:00  Franz Narberhaus (Ruhr-Universität Bochum):
  The role of (p)ppGpp in conditional proteolysis in
  Escherichia coli
10:00 – 10:25  Kürsad Turgay (Leibniz Universität Hannover):
  Curbing protein synthesis is important for the concerted heat
  shock response of Bacillus subtilis
10:25 – 10:50  Gert Bange (Philipps-Universität Marburg):
  Towards a complete biochemical and structural
  understanding of the alarmone metabolism of Bacillus subtilis

11:00 – 11:30  Coffee Break

Session 2. Molecules & methods

Discussion Leader: Gert Bange (Philipps-Universität Marburg)

11:30 – 11:55  Harald Schwalbe (Goethe-Universität Frankfurt):
  NMR-spectroscopic investigation of the conformational
12:20 – 12:45  Volkhard Kaever (Medizinische Hochschule Hannover):
  Appropriate sample preparation is indispensable for accurate
  quantitation of bacterial signaling molecules by mass
  spectrometry

Session 3. cAMP & cGMP

Discussion Leader: Gert Bange (Philipps-Universität Marburg)

12:20 – 12:45  Elizaveta Krol (Philipps-Universität-Marburg):
  Cyclic mononucleotide signaling in the symbiotic alpha-
  proteobacterium Sinorhizobium meliloti
13:00 – 14:00  Lunch

14:00 – 16:00  Poster Session

15:30 – 16:00  Coffee

**Session 3. cAMP & cGMP (continued)**

Discussion Leader: Franz Narberhaus (Ruhr-Universität Bochum)

16:30 – 16:55 Victor Sourjik (Max Planck Institute for Terrestrial Microbiology, Marburg):
Intracellular potassium controls CRP response in *Escherichia coli*

**Session 4. c-di-AMP**

Discussion Leader: Franz Narberhaus (Ruhr-Universität Bochum)

16:55 – 17:20 Jörg Stülke (Georg-August-Universität Göttingen):
Cyclic-di-AMP: an essential second messenger that reports potassium availability and controls potassium homeostasis in *Bacillus subtilis*

17:20 – 17:45 Fabian Commichau (Georg-August-Universität Göttingen):
Role of the essential signalling molecule cyclic di-AMP in maintaining the protective cell envelope in *Listeria monocytogenes*

17:45 – 18:10 Gerd Seibold (Universität Ulm):
The second messenger c-di-AMP controls potassium uptake in *Corynebacterium glutamicum* by binding to the channel CglK

18:10 – 18:35 Natalia Tschowri (Humboldt-Universität zu Berlin):
Cyclic dinucleotide signalling in *Streptomyces* differentiation and stress survival

19:00  Dinner / Get together
Saturday Morning (September 17th 9:00 – 13:00)

Session 5. c-di-GMP

Discussion Leader: Jörg Stülke (Georg-August-Universität Göttingen)

09:00 – 09:25 **Urs Jenal** (Biocentre Basel):
Surface-mediated activation of *Pseudomonas aeruginosa* type IV pili through a novel c-di-GMP effector protein

09:25 – 09:50 **Nicole Frankenberg-Dinkel** (Universität Kaiserslautern):
Mechanism of NO-induced biofilm dispersal in *Pseudomonas aeruginosa*

09:50 – 10:15 **Susanne Häussler** (Helmholtz Centre for Infection Research, Braunschweig):
Transcriptional profiling of c-di-GMP signalling in *Pseudomonas aeruginosa*

10:15 – 10:40 **Sandra Schwarz** (Universität Tübingen):
Oxygen-dependent regulation of a diguanylate cyclase lacking canonical sensory and regulatory domains in *Pseudomonas aeruginosa*

10:45 – 11:15 Coffee break

Discussion Leader: **Urs Jenal** (Biocentre Basel)

11:15 – 11:40 **Regine Hengge** (Humboldt-Universität zu Berlin):
Local c-di-GMP signaling in the control of cellulose biosynthesis in *Escherichia coli*

11:40 – 12:05 **Kai Thormann** (Justus-Liebig-Universität Gießen):
Role of the phosphodiesterase PdeB in localized c-di-GMP regulation

12:05 – 12:30 **Dorota Skotnicka** (Max Planck Institute for Terrestrial Microbiology, Marburg):
Regulation of development in *Myxococcus xanthus* by the second messenger c-di-GMP

12:30 – 12:55 **Annegret Wilde** (Albert-Ludwigs- Universität Freiburg):
A light-triggered behavioural switch in cyanobacterial motility

12:55 – 13:00 Farewell and end of the Meeting